LPB1305A

5-Port PoE+ Gigabit Ethernet Switch User's Manual

Provides four PoE+ ports and one uplink port.

Each port can use a power supply up to 30 W, and the total PoE budget is 62 W.

Customer Support Information

Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500) FREE technical support 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746 • Mailing address: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018 • Web site: www.blackbox.com • E-mail: info@blackbox.com

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FEDERAL COMMUNICATIONS COMMISSION AND INDUSTRY CANADA RADIO FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

Normas Oficiales Mexicanas (NOM) Electrical Safety Statement INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.

5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.

6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.

7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.

8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.

9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.

11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.

13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.

14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.

15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.

16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.

17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.

18. Servicio por personal calificado deberá ser provisto cuando:

A: El cable de poder o el contacto ha sido dañado; u

B: Objectos han caído o líquido ha sido derramado dentro del aparato; o

C: El aparato ha sido expuesto a la lluvia; o

D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o

E: El aparato ha sido tirado o su cubierta ha sido dañada.

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1. Specifications

Approvals	FCC, CE
Buffer Memory	104K bits
Filtering/ Forwarding Rates	1000 Mbps port: 1,488,000 pps; 100 Mbps port: 148,800 pps; 10 Mbps port: 14,880 pps
MAC Address	1 K
Power over Ethernet	Supports up to 30 W for each PoE port; PoE power budget: 62 W; PD classification identify; PoE overcurrent protection, PoE circuit sorting protection, PoE power on RJ-45 pins 3, 6 for power +, pins 1, 2 for power -
Standards	IEEE 802.3: 10BASE-T; IEEE 802.3u: 100BASE-TX; IEEE 802.3ab:1000BASE-TX; IEEE 802.3at/af: Power Over Ethernet
Transmission Media	10BASE-T CAT3, 4, 5 UTP/STP; 100BASE-TX CAT 5 UTP/STP; 1000BASE-TX: CAT5e/6/7 UTP/STP
Transmission Method	Store and Forward
Connectors	(4) RJ-45 PoE+ ports; (1) RJ-45 uplink port; Power connector
Indicators	(10) LEDs: (1) Power, (1) Uplink, (4) LAN port, (4) PoE port
Environment	Temperature: Operating: 32 to 122° F (0 to 50° C); Humidity: 10 to 90% relative, noncondensing
Power	100–240 VAC, 50/60 Hz internal power module
Dimensions	1.5"H x 4.5"W x 7.1"D (3.7 x 11.3 x 18 cm)
Weight	1.8 lb. (0.8 kg)

2. Overview

2.1 Introduction

The 5-Port PoE+ Gigabit Ethernet Switch (LPB1305A) has four PoE+ ports and one uplink port. With PoE+, each port can use a power supply up to 30 W, and the total PoE budget is 62 W.

2.2 What's Included

Your package should include the following items. If anything is missing or damaged, contact Black Box Technical Support at 724-746-5500 or info@blackbox.com.

- (1) PoE+ Switch
- (1) power cord
- A printed Quick Start Guide

*NOTE: To download the user manual (the document you are reading now), go to ftp://ftp.blackbox.com/manuals/L/LPB1305A_USER_rev1.pdf or visit the Black Box Web site (www.blackbox.com) and enter **LPB1305A** in the search bar.*

2.3 Hardware Description

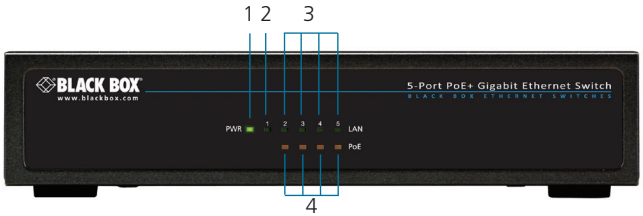

Figure 2-1. Front panel.

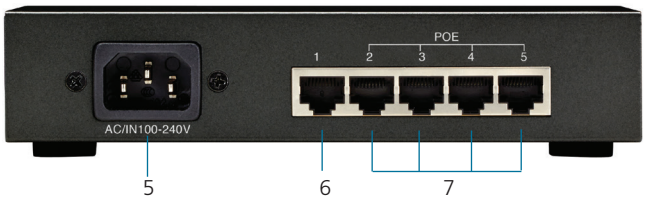

Figure 2-2. Back panel.

Table 2-1. PoE+ switch components.

Number in Figure 2-1 or 2-2	Component	Description
1	(1) Power LED	Lights green when power is on and normal.
2	(1) LAN LED	Lights green/orange on when the 10/100/1000 Ethernet uplink port is connected.
3	(4) 10/100/1000 LEDs	Flashes orange when the port is transferring data at 1000 Mbps. Flashes green when the port is transferring data at 100 Mbps. Off when the port is transferring data at 10 Mbps.
4	(4) PoE+ LEDs	Lights orange when the Power over Ethernet (PoE) function on port ***x*** (where ***x***=2–5) is active. Off when PoE on the port 2–5 is disabled.
5	(1) 3-prong connector	Links to 110–240 VAC power cord.
6	(1) RJ-45 connector	Link Port 1: Connects to a network via CAT5e/6/7 cable.
7	(4) RJ-45 connectors	Ports 2–5: Link to Powered Devices (PD) for Power over Ethernet (PoE).

3. Installation

STEP 1: Connect the AC power cord to the PoE+ switch, and the Power LED will light.

STEP 2: Link Port 1 on the PoE+ switch to a network connection via CAT5e/6/7 cable.

STEP 3: Attach the four PoE+ ports on up to four Powered Devices (PDs) to the four PoE+ ports on the PoE+ switch.

Figure 3-1 shows an application diagram.

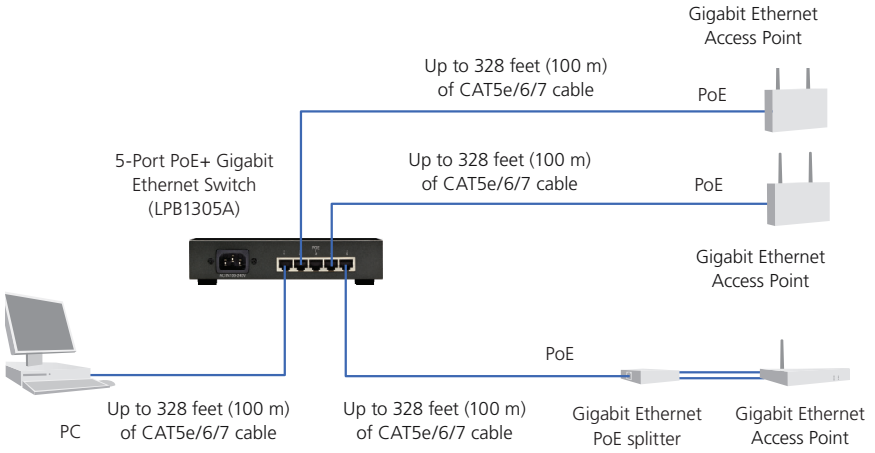

Figure 3-1. Typical installation.

4. Operation

Once installed, the switch operates automatically. LED indicators function as described in Table 4-1.

Table 4-1. LED indicators on the LPB1305A PoE+ Switch.

Indicator	Function
(1) Power LED	Lights green when power is on and normal.
(1) LAN LED	Lights green/orange on when the 10/100/1000 Ethernet uplink port is connected.
(4) 10/100/1000 LEDs	Flashes orange when the port is transferring data at 1000 Mbps. Flashes green when the port is transferring data at 100 Mbps. Off when the port is transferring data at 10 Mbps.
(4) PoE+ LEDs	Lights orange when the Power over Ethernet (PoE) function on port ***x*** (where ***x***=2–5) is active. Off when PoE on the port 2–5 is disabled.

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